

Elevated Transaminases in the outpatient setting
Jim Walls 2012

Common	Less common	Extrahepatic
<ul style="list-style-type: none"> • EtOH • Nonalcoholic fatty liver disease • Medications • Hepatitis B and C • Hemochromatosis 	<ul style="list-style-type: none"> • α_1-antitrypsin deficiency • Autoimmune hepatitis • Wilson's disease 	<ul style="list-style-type: none"> • Celiac disease • Hemolysis • Muscular disorders • Thyroid disorders

Commonly used medications associated with elevated transaminases

acetaminophen	tetracyclines	fluconazole	losartan	trazadone
NSAIDs	HAART	ketoconazole	herbal supplements	risperidone
allopurinol	synthetic PCNs	statins	anabolic steroids	valproic acid
ciprofloxacin	isoniazid	omeprazole	SSRIs	phenytoin
nitrofurantoin	rifampin	lisinopril	bupropion	

Step 1 – H&P, stop offending drugs, repeat AST/ALT

History:

- ROS: Fever, wt loss, anorexia, N/V/D, abd pain, stool or urine change, jaundice, arthralgias (autoimmune hep, hemochromatosis), pruritis (PSC, PBC), bleeding
- PMH: hepatitis, COPD, arthritis, transfusions
- Meds: see above, herbal, OTC
- FHx: cirrhosis, autoimmune d/o's, α_1 AT def, hemochromatosis, Wilson's dz
- Social: EtOH abuse, IVDU, sexual hx, travel hx
- **Physical:**
- HEENT: Scleral icterus, Kayser-Fleischer rings
- Abd: TTP, HSM, ascites
- Skin: Spider angioma, jaundice, palmar erythema
- Other: Fever, gynecomastia, s/sx's c/w hyper/hypothyroid, asterixis, clubbing
- **Stop EtOH and hepatotoxic drugs** – see above
- **Repeat AST/ALT** in 2 to 4 weeks
- Consider checking *fasting lipids and glucose* to evaluate for metabolic syndrome
- Consider also checking for *Hep C*: can cause transient transaminitis

• **Step 2** – If transaminitis persist, r/o other common causes

- Hep C Ab, HBsAg, HBcAb
- LFTs (albumin, bilirubin), GGT, PT/INR, CBC for plts
- Fe, TIBC, % sat, ferritin
- Fasting lipid panel and glucose
- Liver U/S

• **Step 3** – If still no clear cause, then lifestyle changes and r/o less common causes

- Diet and exercise
- Treat dyslipidemia, DM
- TSH, tTG (celiac), ceruloplasmin (Wilson's), SPEP (autoimmune hep and α_1 AT def)
- LDH, haptoglobin and retic (hemolysis), CK and aldolase (MSK)
- anti-smooth muscle antibody (autoimmune hep)

• **Step 4** – Consider liver biopsy

- If no clear source, and if no resolution after 6 months of treatment and lifestyle modification, then consider referring to GI for a liver biopsy

References:

Weinstock, Michael B., Daniel M. Neides, and Mariam Chan. *The Resident's Guide to Ambulatory Care*. 6th ed. Columbus: Anadem, 2009. 222-3. Print.
Oh, Robert C. "Causes and Evaluation of Mildly Elevated Liver Transaminase Levels." *American Family Physician*. 84.9 (2011): 1003-8. Print.